

CLAIMS

1. A shut-off device for protection against explosion in a pipe-line, with a slide valve plate (10) slidable transversely to the direction of flow (A), connected via a piston rod (25, 26) to a piston (27, 28) actuated by a pressure medium and slidable in a cylinder (35, 36), whereby the pressure medium can be delivered from a pressure medium reservoir via at least one closing valve (45) into a working chamber (46, 47) of the cylinder (35, 36), at the same time moving the slide valve plate (10), by piston actuation, into a position closing a pipe passage (4), characterised in that there is at least one cylinder (35, 36) arranged within a pressure chamber (40) enclosed by a housing (30) which forms the pressure medium reservoir.
2. A shut-off device for protection against explosions according to Claim 1, characterised in that the housing (30) has an end wall (37) delimiting at the end face the pressure chamber (40), which forms a cylinder head delimiting the working chamber (46, 47) of the cylinder (35, 36), whereby the closing valve (45) is fitted in this end wall (37) and the end wall (37) has on the one hand a connecting duct (57) closable by a valve disk (56) of the closing valve (45) and leading to the working chamber (46, 47) of the cylinder (35, 36) and, on the other, a pressure chamber outlet port (55) connectable to the connecting duct (57) on opening the closing valve (45).

3. A shut-off device for protection against explosions according to Claim 2, characterised in that the piston rod (25, 26) coupled to the slide valve plate (10) is slidably guided through an end wall (31) of the housing (30), whereby the slide valve plate (10) is arranged in a gap (9) of a slide valve housing (7) firmly connected to the housing (30).

4. A shut-off device for protection against explosions according to Claim 3, characterised in that the end wall (31) of the housing (30) at the valve plate end in the area of the cylinder (35, 36) has an outlet port (50) which connects the displacement chamber (48, 49) of the cylinder (35, 36) to a quick-venting valve (51) which is also fitted in the end wall (31).

5. A shut-off device for protection against explosion according to one of the Claims 2 to 4, characterised in that two cylinders (35, 36) arranged parallel to each other are located in the pressure chamber (40) and the slide valve plate (10) is coupled in its side areas to each piston rod (25, 26) of these cylinders, whereby the pressure medium is supplied to their working chamber (46, 47) via a common closing valve (45) and a forked connecting duct (57).

6. A shut-off device for protection against explosions according to one of the Claims 1 to 5, characterised in that the slide valve plate (10) is designed as a slide valve plate with a passage opening aperture (20) and a shutting off part (21).

7. A shut-off device for protection against explosions according to Claim 6, characterised in that each flange part (2, 3) is attached to the slide valve housing (7), the through passages (12, 13) of which form together with the through aperture (20) in the slide valve plate (10) the pipe passage (4), whereby an annular sealing element (14, 15) is fitted in the end face of each flange part (2, 3), each having a sealing ring (16, 17) surrounding the through passage (12, 13) forming

a guide for the slide valve plate (10), the said ring being provided with a material which has good sliding properties.

8. A shut-off device for protection against explosions according to one of the claims 3 to 7, characterised in that an abutment strip (73) is movably guided at the end in the slide valve housing (7) in the direction in which the slide valve plate (10) is shifted, whereby preferably at least one elastomer part (74) with the existing spaces (75) is loosely placed between the abutment strip (73) and the end piece (70).

9. A shut-off device for protection against explosions according to one of the Claims 2 to 8, characterised in that a part of the closing valve (45) and further control elements (60) for controlling the movement of the piston or of the slide valve plate are arranged outside the housing (30) at the end wall (37) forming the cylinder head and are encapsulated by a cap (61) which can be placed over the housing (30).